

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Original) A radiology device comprising an X-ray source (11) for exposing a subject (S) to the radiation of said source, means (12) for converting the X-rays into optical images so as to form primary optical images, means (20) for transforming the primary optical images into secondary optical images, and means (40) for displaying the secondary images to a user, characterized in that the means for forming the secondary optical images comprise an optical chain comprising in succession, from the output of the converter to the output of the device, an image enlargement assembly (22) exposed directly to the primary images from said conversion means (12), an assembly (23) for optical intensification of the enlarged images and a photosensitive matrix sensor (25) for making said secondary images.
2. (Original) The radiology device as claimed in claim 1, characterized in that the enlargement assembly (22) is a variable enlargement assembly (22), able to enlarge the images according to a desired enlargement coefficient within a given range.
3. (Original) The radiology device as claimed in claim 1 or 2, characterized in that the enlargement assembly (22) is made up solely of optical elements performing no discretization of the images.
4. (Previously Amended) The radiology device as claimed in claim 1, characterized in that it comprises means for moving the elements of the optical chain in a plane generally parallel to the midplane of the conversion means.

5. (Previously Amended) The radiology device as claimed in claim 4, characterized in that it comprises a central control unit (30) for controlling the movement of the elements of the optical chain.

6. (Previously Amended) The radiology device as claimed in claim 5, characterized in that the central control unit is physically distanced from the other elements of the device.

7. (Previously Amended) The radiology device as claimed in claim 1, characterized in that it comprises means for controlling the exposure and the degree of enlargement of the images.

8. (Previously Amended) The radiology device as claimed in claim 1, characterized in that the assembly (23) for optical intensification of the images comprises components of the MCP type.

9. (Previously Amended) The radiology device as claimed in claim 1, characterized in that it comprises means (31) for digitizing the secondary images arising from the photosensitive matrix sensor.

10. (Previously Amended) The radiology device as claimed in claim 9, characterized in that it comprises interfaces for distributing the images destined for digital peripherals.

11. (Previously Amended) The radiology device as claimed in claim 1, characterized in that it comprises a screen for visualizing the digitized secondary images.

12. (Previously Amended) The radiology device as claimed in claim 1, characterized in that the means (12) for converting the X-rays into optical images consist of a fluoroscopy screen of the phosphor coating screen type.

13. (Previously Amended) The radiology device as claimed in claim 1, characterized in that said optical chain is directed along a different axis from the normal to the midplane of the means (12) for converting the X-rays into optical images, the device comprises a mirror for deflecting the primary images to the optical chain and the device comprises a shield (27) for protecting the elements of the optical chain from the X-rays.

14. (Previously Amended) The radiology device as claimed in claim 1, characterized in that the optical chain comprises a refocusing lens (24).

15. (Previously Amended) The radiology device as claimed in claim 1, characterized in that it comprises a mirror (28) for separating the images arising from the intensification assembly (23) and a digital video camera (29).

16. (Previously Amended) The radiology device as claimed in claim 1, characterized in that optical coupling between the intensification assembly (23) and the sensor (25) is effected by optical fibers (24').

17-18. (Cancelled)

19. (Previously presented) The radiology device as claimed in claim 2, characterized in that it comprises means for moving the elements of the optical chain in a plane generally parallel to the midplane of the conversion means.

20. (Previously presented) The radiology device as claimed in claim 19, characterized in that it comprises a central control unit (30) for controlling the movement of the elements of the optical chain.

21. (Previously presented) The radiology device as claimed in claim 20, characterized in that the central control unit is physically distanced from the other elements of the device.

22. (Previously presented) The radiology device as claimed in claim 2, characterized in that it comprises means for controlling the exposure and the degree of enlargement of the images.

23. (Previously presented) The radiology device as claimed in claim 2, characterized in that the assembly (23) for optical intensification of the images comprises components of the MCP type.

24. (Previously presented) The radiology device as claimed in claim 2, characterized in that it comprises means (31) for digitizing the secondary images arising from the photosensitive matrix sensor.

25. (Previously presented) The radiology device as claimed in claim 24, characterized in that it comprises interfaces for distributing the images destined for digital peripherals.

26. (Previously presented) The radiology device as claimed in claim 2, characterized in that it comprises a screen for visualizing the digitized secondary images.

27. (Previously presented) The radiology device as claimed in claim 2, characterized in that the means (12) for converting the X-rays into optical images consist of a fluoroscopy screen of the phosphor coating screen type.

28. (Previously presented) The radiology device as claimed in claim 2, characterized in that said optical chain is directed along a different axis from the normal to the midplane of the means (12) for converting the X-rays into optical images, the device comprises a mirror for deflecting the primary images to the optical chain and the device comprises a shield (27) for protecting the elements of the optical chain from the X-rays.

29. (Previously presented) The radiology device as claimed in claim 2, characterized in that the optical chain comprises a refocusing lens (24).

30. (Previously presented) The radiology device as claimed in claim 2, characterized in that it comprises a mirror (28) for separating the images arising from the intensification assembly (23) and a digital video camera (29).

31. (Previously presented) The radiology device as claimed in claim 2, characterized in that optical coupling between the intensification assembly (23) and the sensor (25) is effected by optical fibers (24').

32-33. (Cancelled)

34. (Previously presented) The radiology device as claimed in claim 3, characterized in that it comprises means for moving the elements of the optical chain in a plane generally parallel to the midplane of the conversion means.

35. (Previously presented) The radiology device as claimed in claim 34, characterized in that it comprises a central control unit (30) for controlling the movement of the elements of the optical chain.

36. (Previously presented) The radiology device as claimed in claim 35, characterized in that the central control unit is physically distanced from the other elements of the device.

37. (Previously presented) The radiology device as claimed in claim 3, characterized in that it comprises means for controlling the exposure and the degree of enlargement of the images.

38. (Previously presented) The radiology device as claimed in claim 3, characterized in that the assembly (23) for optical intensification of the images comprises components of the MCP type.

39. (Previously presented) The radiology device as claimed in claim 3, characterized in that it comprises means (31) for digitizing the secondary images arising from the photosensitive matrix sensor.

40. (Previously presented) The radiology device as claimed in claim 39, characterized in that it comprises interfaces for distributing the images destined for digital peripherals.

41. (Previously presented) The radiology device as claimed in claim 3, characterized in that it comprises a screen for visualizing the digitized secondary images.

42. (Previously presented) The radiology device as claimed in claim 3, characterized in that the means (12) for converting the X-rays into optical images consist of a fluoroscopy screen of the phosphor coating screen type.

43. (Previously presented) The radiology device as claimed in claim 3, characterized in that said optical chain is directed along a different axis from the normal to the midplane of the means (12) for converting the X-rays into optical images, the device comprises a mirror for deflecting the primary images to the optical chain and the device comprises a shield (27) for protecting the elements of the optical chain from the X-rays.

44. (Previously presented) The radiology device as claimed in claim 3, characterized in that the optical chain comprises a refocusing lens (24).

45. (Previously presented) The radiology device as claimed in claim 3, characterized in that it comprises a mirror (28) for separating the images arising from the intensification assembly (23) and a digital video camera (29).

46. (Previously presented) The radiology device as claimed in claim 3, characterized in that optical coupling between the intensification assembly (23) and the sensor (25) is effected by optical fibers (24').

47-48. (Cancelled)